

Georgia Department of Transportation

Construction Engineering Inspection Training

Bases and Subbases Inspection—Group 2

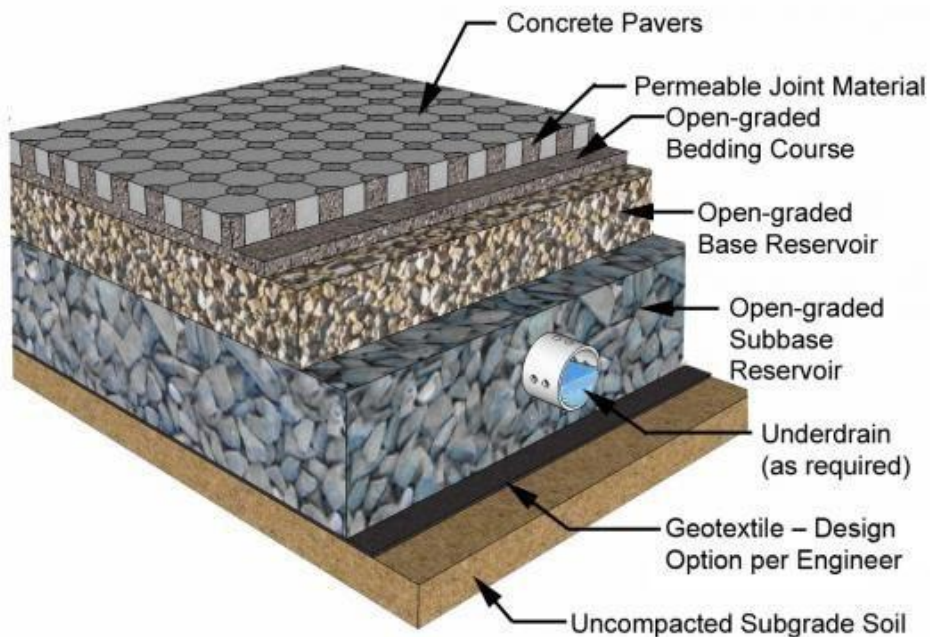


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Section 222: Aggregate Drainage Courses

Embankment or Subgrades

- Spread a uniform layer of coarse or fine aggregate without segregation and compact to specifications
- Use hauling and spreading equipment approved by the Engineer
- Use trucks for end-dumping and bulldozers/road machines for spreading on wet and unstable areas

Construction

- Construct the roadbed according to lines, grades, and typical cross sections shown on the plans
- Use coarse aggregate, drainage course, and drainage blanket as follows:

Aggregate Drainage Course	Use
Type I	Trench around a pipe or in a shoulder in conjunction with a trench
Type II	Drainage blanket under sidewalks, curbs, gutters, and beneath pavement system or shoulders
Type III	Drainage blanket material as indicated on the plans



Embankments or Subgrades

- Spread material uniformly to a maximum 6-in. (150 mm) thickness
- *Compaction*: Begin rolling on the outer edge of the drainage course and progress toward the center
- *Super-elevated Compaction*: Begin rolling on the lower edge and progress toward the higher
- Compact the final layer with a steel-wheeled roller or vibratory roller

Roll until surfaces or each layer are uniformly compacted

Other Surfaces

- Excavate/trench low areas for positive drainage before placing drainage material
- Spread and compact material as required (until stable)

Payment

- Aggregate drainage course is paid at the Contract Unit Price per ton (megagram) or per cubic yard (meter)

Related Specifications

Section	Title
109	Measurement and Payment
208	Embankments
209	Subgrade Construction
806	<u>Aggregate for Drainage</u>

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Section 225: Soil-Lime Construction

Stabilization Materials Information

Material Type	Construction Information
Soil	<ul style="list-style-type: none">• Consist of materials found in roadbed, base, subbase, or added materials as directed by the Engineer• Remove from soil: Particles of aggregate too large to pass through 3-in. (75 mm) sieve, roots, stumps, grass turfs, and other vegetable matter
Water	<ul style="list-style-type: none">• Without detrimental quantities of oil, salt, acid, or alkalis• Provide test results of non-potable water to the Engineer prior to use
Lime	<ul style="list-style-type: none">• Application rate determined from the laboratory test and provided to the Contractor
Bituminous Prime	<ul style="list-style-type: none">• Use prime and blotter material consisting of cutback asphalt of the specified grade

Equipment

- Use mechanical spreaders capable of uniformly distributing bulk lime or slurry to the actual application rate as shown in the plans
- Do not distribute dry lime by pneumatic pressure
- Use rotary-type soil mixers capable of mixing to a 12-in. (300 mm) minimum depth
- Use a type and weight of equipment that will not damage lime-treated soil
- Do not begin construction until the Engineer has approved the proposed equipment



Preparation for Soil-Lime Construction

- Grade/shape the underlying foundation to the required lines, grades, and cross section
- Compact the foundation to the required density
- Dry the foundation, if necessary
- Ensure the foundation can support the construction and compaction equipment
- Stabilize soft or yielding material
- Scarify and partially pulverize each layer of material to be treated
- Remove all detrimental material from the soil



Test Section

- Test the first section of each mixing operation
- Length is the required length to use all the lime of one truck
- If necessary, change equipment, methods, or initial grade elevations based on the test section results

Lime Application

- Apply uniformly so the quantity applied does not vary more than $\pm 10\%$ of the specified quantity
- Apply lime only to areas that are mixed in 1 day
- Do not mix lime with frozen soils or with soils containing frost
- Perform only when air temperature is above 45°F (7°C) and only between April 1 and October 15, unless the Engineer directs otherwise
- Incorporate the material into the soil with mixing equipment
- If necessary, add more water to the mix to accelerate mellowing
- Spread lime on scarified areas at a specific rate
- Distribute material uniformly to avoid excessive loss

Lime application rate is determined by the Engineer

Stabilization Methods

Method	Construction Information
Dry Application with Quicklime	<ul style="list-style-type: none">• Adjust the design application rate of hydrated lime for quicklime properties• Do not apply if wind conditions could make blowing lime hazardous for traffic, workers, or adjacent property• Minimize lime pockets by applying to relatively smooth shaped and rolled areas
Slurry of Hydrated Lime	<ul style="list-style-type: none">• Create lime slurry by mixing 30% dry lime solids by weight with 70% water• Mix slurry in agitating equipment, and continue to agitate until arriving at the roadbed• Spread slurry on the scarified area with the distributing equipment
Slurry by Slaking Quicklime	<ul style="list-style-type: none">• Create lime slurry by slaking quicklime using special equipment at/near Project site• Obtain the Engineer's approval for equipment and procedures

Mix Lime Procedure

- Maintain the moisture content of material at the `specified optimum or not more than 5% over optimum at all times
- Add water during mixing, if necessary
- Incorporate lime and water with rotary mixers until uniform
- Reshape treated course to the approximate line, grade, and typical section
- Seal with a light, pneumatic-tired roller and other approved equipment
- *Mellow Time*: 12–72 hours

Curing Lime

- Keep lime moist for 7 days after lime-treated soil is finished
- Apply bituminous prime material to protect lime-stabilized base, subbase, or shoulder course
- Apply prime as soon as possible—no later than 24 hours after completing finishing operations (unless delayed by wet weather)
- Remove loose and extraneous material on the lime-treated soil surface

Finishing

- Completed lime-stabilized surface layer conforms to lines, grades, and cross sections
- Ensure the layer meets the following requirements:
 - Uniform lime mixture
 - Smooth
 - Dense
 - Well-bonded

- Unyielding
- Free of cracks or loose material



Payment

- Soil-lime material is paid at the Contract Price per square yard (meter) or per cubic yard (meter)
- Soil-lime–treated roadbed base and subbase course is paid at the Contract Price per square yard (meter)
- Pre-mixed soil-lime–treated base and subbase course is paid at the Contract Price per ton (megagram) or square yard (meter)
- Lime is paid at the Contract Price per ton (megagram)

Related Specifications

Section	Title
109	Measurement and Payment
205	Roadway Excavation
209	Subgrade Construction
301	Soil-Cement Construction
412	Bituminous Prime
810	Roadway Materials
814	Soil Base Materials
821	Cutback Asphalt
880	Water
882	Lime

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Section 233: Haul Roads

Haul Roads: Routes used for transporting materials to a Project

General

- Maintain the haul road to the Engineer's satisfaction during hauling
- The Department will determine sources of local materials and commercially produced aggregates for haul roads
- Restore the haul road to a condition equal to what existed before operations started



Related Specifications

Section	Title
109	Measurement and Payment
209	Subgrade Construction
317	Reconstructed Base Course
400	Hot Mix Asphalt Concrete Construction
412	Bituminous Prime
413	Bituminous Tack Coat
424	Bituminous Surface Treatment

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Section 300: General Specifications for Base and Subbase Courses

This Specification applies to all base and subbase courses except asphaltic concrete.

Central Mix Plants

- Check all scales with standard weights for accuracy before the mixture is delivered to the site
- Scales must be accurate within 0.5% of the measured load
- Equip each plant with an approved mixer
- Mix the substance until a homogeneous and uniform mixture is present
- Proportion water by weight (use spray bars to evenly distribute through the mixture)
- Use sampling equipment approved by the Engineer
- Allow use of multiple-pass mixers or traveling-plant mixers (in-place)

Static Rollers

Roller	Information
Trench	<ul style="list-style-type: none">• Use at least one for base widening• Must have a guiding roller or wheel that operates in tandem with the compression roller• Must be equipped with an auxiliary wheel or roller• Must compact a minimum width of 15 in. (375 mm)
Steel-Wheeled	<ul style="list-style-type: none">• Use 3-wheel or tandem wheels• Use self-propelled rollers equipped with cleaning devices• Have a minimum weight of 10 tons (9 Mg)
Pneumatic Tire	<ul style="list-style-type: none">• Must have a minimum contact pressure of 50 psi (345 kPa)• Equip rollers to uniformly distribute loads between all wheels• Operate between 3 and 8 mph (5–13 kph)
Sheepsfoot	<ul style="list-style-type: none">• Use vibratory or static compaction rollers of sufficient size and weight to obtain desired compaction



Preparation

- Remove grass, weeds, roots, and other debris from local material pits
- Repair all defective portions of the subgrade before construction
- Prepare the subbase to the requirements of the surface and compaction
- Ensure it is stable enough to support equipment placed on base material without rutting or pumping



Construction

- Mine all the material pits' boundaries and grid depths that are established by the Engineer
- Mine the materials from the top to the bottom
- Mix the material in the pit before hauling it to the roadbed or plant
- Place the materials in windrows or stockpiles with a dragline or backhoe

Placing Materials

- *Mixture Control*: The Engineer will determine proportions of materials needed to compound the base or subbase
- *Moisture Control*: Add water uniformly, allow it to evaporate or aerate, and roll materials often to control moisture content within the limits specified
- *Number of Courses*: Maximum thickness of base or subbase material is subject to the Engineer's approval
- *Widening Work*: Excavate an area that can be completed in the same day
- *Compaction*: Compact the entire thickness of all bases and subbases to the specified maximum dry weight per cubic ft (m)

Base and Subbase courses are paid in accordance with the
Specification Section for each item

Related Specifications

Section	Title
106	Control of Materials
107	Legal Regulation and Responsibility to the Public
109	Measurement and Payment
150	Traffic Control
152	Field Laboratory Building
160	Reclamation of Material Pits and Waste Areas
205	Roadway Excavation
206	Borrow Excavation
209	Subgrade Construction
412	Bituminous Prime
831	Admixtures

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Section 301: Soil-Cement Construction

This work includes constructing a base, subbase, or shoulder course composed of soil, or a mixture of soils, and stabilizing with Portland Cement.

Mixed-in-Place Method

Central Plant Mix Method

The Contractor must submit a construction work plan to the Engineer for approval before construction begins

Construction Requirements

- Mix and place cement-treated base or subbase only when the weather permits the course to be finished without interruption in the specified time (air temperature above 40°F)
- Mix and place materials only when the moisture content of the soil meets the specifications
- Ensure that soil temperature is above 50°F
- Provide equipment in good working condition that can allow continuous prosecution of the work



Category	Information
Soil	<ul style="list-style-type: none"> Place and spread additional soil uniformly to the proper depth and thickness
Pulverization	<ul style="list-style-type: none"> Loosen roadbed materials to the width and depth to be stabilized without disturbing the underlying subgrade Add water to assist, if necessary Remove all roots, sod, and rocks that exceed 3 in. in diameter
Cement	<ul style="list-style-type: none"> Uniformly spread the required amount with a cyclone-type mechanical spreader or equivalent Apply on days when the wind will not interfere with spreading Pass only the spreading and mixing equipment over the spread cement
Mixing	<ul style="list-style-type: none"> Uniformly windrow the material if required by the mixing plant Begin as soon as possible after the cement is spread Mix until a homogeneous and uniform mixture is produced

Moisture Control

- Ensure uniform moisture content of the mixture is 100–120% of the optimum moisture content
- Cease operations and make the adjustments to bring the moisture content within tolerance
- Do not use materials that “pump” under the construction traffic



Additional Compaction Requirements

- Compact the soil-cement base, subbase, or shoulder to 98% maximum dry density
- Do not perform vibratory compaction on materials more than 1.5 hours old
- Uniformly compact the mixture and fine-grade surface to the desired line, grade, and cross section
- Remove loosened material accumulated during this process
- Use a pneumatic-tired roller to finish the surface until the surface is smooth, closely knit, free from cracks, and conforms to the proper grade line and cross section

Opening to Traffic: No traffic or equipment is permitted to operate on finished base, subbase, or shoulders until the prime has hardened enough to not pick up under traffic

Payment

Item	Payment Method
Soil-Cement Material	Contract Price per cubic yard (meter)
Soil-Cement Stabilized Base, Subbase, and Shoulder Course	Contract Price per cubic yard (meter)
Pre-mixed Soil-Cement Stabilized Base, Subbase, and Shoulder Course	Contract Price per ton (megagram) or square yard (meter)
Portland Cement	Contract Price per ton (megagram)
Fly Ash and Slag	Contract Price per ton (megagram)

Related Specifications

Section	Title
109	Measurement and Payment
205	Roadway Excavation
300	Subgrade Construction
412	Bituminous Prime
814	Soil Base Materials
821	Cutback Asphalt
830	Portland Cement
831	Admixtures
880	Water

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Section 302: Sand-Bituminous Stabilized Base Course

This work includes constructing a base course composed of sand, or a mixture of sands that is stabilized with bituminous materials.

General Construction

- The Engineer determines the suitability of existing roadbed materials for inclusion in the base course
- Do not apply bituminous materials when the air temperature is less than 60°F in the shade or when the subgrade, subbase, or soil is below 50°F
- Remove roots, sod, or rock more than 3 in. (75 mm) in diameter and all other harmful materials from the roadbed



- Blend new materials with the prepared roadbed before adding bituminous material
- Place additional new soil (sand) on the roadbed and spread uniformly to the proper depth and thickness of the compacted base course
- Place materials only on dry, unfrozen subgrade or subbase

Loosen and pulverize material to be stabilized without disturbing the underlying subgrade or subbase

- Add water to the mixture using accurate gauging devices
- Ensure that the moisture is uniformly distributed
- The Engineer will determine the quantity of bituminous material required

Mixing

- Shape the base to the line, grade, and cross section indicated in the plans
- Begin aeration as soon as the prepared base is long enough to permit equipment operation
- Loosen and turn the mixture with harrows, blades, or equivalent until the volatile solvents and water evaporate and the mixture is tacky
- Spread to a maximum compacted lift thickness of 8 in. (200 mm)
- Lay a maximum lift thickness for which the specified compaction is obtained



Compacting and Finishing

Construction Type	Information
Single-Course and Multiple-Course	<ul style="list-style-type: none">• Shape course line, grade, and cross section• Roll the surface with a pneumatic-tired roller followed by a steel-wheeled roller to seal the surface• Begin rolling at the edges and work toward the center
Irregular Areas	<ul style="list-style-type: none">• Compact areas inaccessible to a roller by using mechanical tampers approved by the Engineer

Payment

Item	Payment Method
Base Course Material	Contract Unit Price per cubic yard (meter)
Sand-Bituminous Stabilized Base Course	Contract Unit Price per square yard (meter)
Sand-Bituminous Stabilized Base Course Pre-Mixed	Contract Unit Price per ton (megagram) or per square yard (meter)
Bituminous Material	Contract Unit Price per gallon (liter)

Related Specifications

Section	Title
105	Control of Work
109	Measurement and Payment
400	Hot Mix Asphaltic Concrete Construction
412	Bituminous Prime
814	Soil Base Materials
821	Cutback Asphalt
822	Emulsified Asphalt
823	Cutback Asphalt Emulsion

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Section 303: Topsoil, Sand-Clay, or Chert Construction

This work includes constructing a base, subbase, or shoulder course using topsoil, sand-clay, or chert, stabilized with aggregate where required.

Materials

- *Roadbed*: Use or remove and replace with approved materials as directed by the Engineer
- Handle and place materials carefully to prevent separation of fine and coarse materials
- Spread multiple materials in separate layers to the proper depth
- Place proper proportions of required ingredients on the roadbed and distribute uniformly



Spreading, Mixing, and Stabilizing Base, Subbase, or Shoulder Course

- Spread material lengthwise up to 2500 ft (750 m) on the roadbed—place additional material as the Engineer requires
- Mix material by one of these methods: Plowing, harrowing, blading, or traveling plant
- Spread stabilized aggregate uniformly, if specified in the Contract or plans
- Remix and reshape all sections of the course as needed

Compacting and Finishing a Base, Subbase, or Shoulder Course

- Ensure moisture content is uniformly distributed within 90–120% optimum
- Compact in two courses of equal thickness if the initial thickness is more than 8 in. (200 mm)
- Roll until the course is uniformly compacted to 100% maximum dry density
- After completing the base, apply bituminous prime according to Section 412, as required.



Complete all courses of any section of construction started in the same day

Payment

Item	Payment Method
Topsoil, Sand-Clay, or Chert Base, Subbase, and Shoulder Course	Contract Unit Price per cubic yard (meter) or per square yard (meter)
Stabilizer Aggregate	Contract Unit Price per ton (megagram)

Related Specifications

Section	Title
106	Control of Materials
202	Random Clearing and Grubbing
205	Roadway Excavation
206	Borrow Excavation
412	Bituminous Prime
803	Stabilizer Aggregate
814	Soil Base Materials
821	Cutback Asphalt
823	Cutback Asphalt Emulsion

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Section 304: Soil Aggregate Construction

This work includes constructing a base, subbase, or shoulder course composed of mineral aggregate and soil mortar on prepared subgrade or subbase.

Steps for spreading and mixing base, subbase, or shoulder course:

- Uniformly spread the material with an approved mechanical spreader to obtain the desired thickness
- Plow, harrow, and blade the material to full depth without disturbing underlying courses
- Harrow and disc harrow the material
- Plow alternately at edges and center, back and forth, as many times as necessary

Compact and finish surface to 98% maximum dry density

Thickness Tolerances

- Requirements apply to shoulder construction where the plans specify a uniform thickness

Maintenance

- The Contractor maintains the course until the Engineer determines that it has cured sufficiently and is ready to prime

Payment

Item	Payment Method
Soil Aggregate Base Course	Contract Unit Price per square yard (meter)
Soil Mortar	Contract Unit Price per cubic yard (meter)



Related Specifications

Section	Title
105	Control of Work
109	Measurement and Payment
412	Bituminous Prime
816	<u>Soil Aggregate Bases</u>

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Section 307: Impermeable Membrane for Subgrades, Basins, Ditches, and Canals

Use the following to construct a waterproofing layer (impermeable membrane):

- Cross-laminated, high-density polyethylene film
- Flexible, self-adhesive, rubberized asphalt



Placement

- Place the membrane on a soil blanket or cushion at least 6 in. (150 mm) thick
- Ensure the membrane contains material fine enough to pass a No. 10 (2 mm) sieve
- Ensure the membrane is at least 4 ft (1.2 m) wide
- Protect the membrane from damage at all times
- Remove and replace sections damaged by sunlight, heat, sharp objects, or other sources

Remove and replace sections damaged by sunlight, heat,
sharp objects, or other sources

Payment

- Impermeable membrane for subgrades, basins, ditches, and canals is paid by the Contract Unit Price per square yard (meter)

Related Specifications

Section	Title
888	Waterproofing Membrane Materials

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Section 310: Graded Aggregate Construction

This work includes constructing a base, subbase, or shoulder course composed of mineral aggregates.



Material Placement

- Use the central plant mix method unless producing aggregates
- Proportion aggregate and water into a homogeneous and uniform mixture when mixing
- Uniformly spread materials to the proper depth with a mixture spreader
- Do not use materials containing frost or frozen particles
- Construct lifts in a maximum thickness of 8 in. (200 mm) compacted

Do not use materials containing frost or frozen particles

Material Compaction

- Ensure the moisture content of materials is uniformly distributed and allows compaction to the specified density
- Uniformly compact the course after shaping the spread material to line, grade, and cross section
- Ensure the compacted base is sufficiently stable to support the construction equipment without pumping



- Dry and rework the underlying subgrade, if necessary
- Finish the subbase surface for portland cement concrete pavement or asphaltic concrete pavement with automatically controlled screed equipment
- Maintain the course until the Engineer determines it has cured sufficiently and is ready to prime

Priming the Base

- Apply bituminous prime according to Section 412 **unless:**
- Graded Aggregate base is under Portland Cement Paving
- Graded aggregate base is under asphaltic concrete paving that is 5 inches or more in total thickness

Payment

- Graded aggregate base, subbase, or shoulder course are paid at the Contract Unit Price per ton (megagram)

Related Specifications

Section	Title
105	Control of Work
412	Bituminous Prime
815	Graded Aggregate
821	Cutback Asphalt
823	Cutback Asphalt Emulsion

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Section 317: Reconstructed Base Course

This section includes:

- Reshaping the existing road surface
- Adding the required amount of new material
- Compacting materials to form the foundation course for other base courses, surface courses, or pavements
- Constructing base courses according to the specifications

Methods

- Remove and replace unsuitable material with approved material
- Remove and stockpile the existing base
- Scarify the upper surface of the finished base course to a uniform depth



- Eliminate all depressions and irregularities
- Shape the subgrade or remaining material as directed to add material
- Place stockpiled material, along with any additional new material, on the roadbed
- Thoroughly mix the old and new base course according to requirements
- Compact and finish according to specifications for the type of base being reconstructed



Payment

- Removed and stockpiled material and replaced base material are paid by the Contract Unit Price per cubic yard (meter)
- Base preparation is paid by the Contract Unit Price per mile (kilometer) or per square yard (meter)

Related Specifications

Section	Title
109	Measurement and Payment
412	Bituminous Prime

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Section 318: Selected Material Surface Course

Material Specifications

Material	Description
Satisfactory	Use in-place roadbed or driveway material when determined to be acceptable by the Engineer
Unsuitable	Remove roadbed materials unsuitable for use as determined by the Engineer
Additional	Use materials approved by the Engineer to add materials to those in the roadbed or to build up the surface course entirely



Maintain the finished surface course to the required cross section until the Project is complete and accepted

Methods

- Spread selected material by the approved method to the thickness prescribed on the plans
- Scarify, mix, and shape the selected material to the required cross section
- Roll until the surface is thoroughly compacted, firm, and unyielding
- Add water to assist with scarifying and compaction

This pay item is commonly used as aggregate surface course on unpaved driveways during construction to provide adequate ingress and egress to public access points.



Payment

Item	Payment Method
Selected Material Course Surface	Contract Unit Price per cubic yard (meter)
In-Place Selected Material Surface Course	Contract Unit Price per square yard (meter)
Stabilizer Aggregate	Contract Unit Price per ton (megagram)
Aggregate Surface Course	Contract Unit Price per ton (megagram)

Related Specifications

Section	Title
205	Roadway Excavation
800	Coarse Aggregate
803	Stabilizer Aggregate
814	Soil Base Materials
815	Graded Aggregate

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Section 325: Stabilized Base Material for Patching

General Description

Work includes patching with the soil-cement construction, cement-stabilized graded aggregate construction, or select material-stabilized construction

Check all labor, equipment, and materials to ensure a continuous patching operation is on hand before patching begins

Preparation

- Trim the sides of areas to be patched and leave them vertical
- Remove all loose material
- Remove unsatisfactory material to the depth shown on plans (at least 6 in. of material)
- Undercut areas of unsatisfactory material 1 ft (300 mm) below the existing surface
- Back the area with subgrade stabilizer-select material to 1 ft (300 mm) below the existing surface



Construction

- Patch during traffic, unless otherwise specified
- Compact the patches at optimum moisture to a minimum 100% of maximum laboratory dry density
- Compact to the required degree with a conventional steel-wheeled, pneumatic-tired roller; mechanical tampers; or other devices
- Lightly spray or mop each patch with bituminous prime
- Sand the primed areas subject to traffic, as directed by the Engineer
- Repair/replace the damaged patch





Payment

Item	Payment Method
Base Material	Contract Unit Price per cubic yard (meter)
Subgrade Stabilizer-Select Material	Contract Unit Price per square yard (meter)

Related Specifications

Section	Title
109	Measurement and Payment
209	Subgrade Construction
412	Bituminous Prime
810	<u>Roadway Materials</u>

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Section 326: Portland Cement Concrete Subbase

This work includes constructing a subbase composed of a mixture of Portland cement and graded aggregate, or Portland cement, aggregate, and sand.

Equipment

- *Concrete Batching Equipment:* Provide separate bins and weighing hoppers for aggregate and cement in the batching plant
- *Slipform Paver and Spreader:* Use a self-propelled slipform paver equipped with tracks sufficient to prevent slippage and bogging when loaded



Do not allow workers to walk in fresh concrete with shoes coated with dirt or other foreign substances

Construction

Item	Information
Mixing	<ul style="list-style-type: none">• The Engineer will determine design proportions of required material based on mixes prepared in the laboratory or trials performed in construction• Determine the batch weights required to produce the necessary quantity• Continue mixing until producing a homogeneous and uniform mixture
Placing	<ul style="list-style-type: none">• Spread the mixture on grade with minimum rehandling• Hand spread with shovels, if necessary• Do not place portland cement concrete on muddy, puddled, or frozen subgrade
Consolidating	<ul style="list-style-type: none">• Vibrate the mixture to full length, width, and depth of the section• Ensure the vibration does not produce puddling or excessive ground accumulation
Finishing	<ul style="list-style-type: none">• Finish the mixture to the proper cross section• Use equipment that produces a uniform surface free of irregular, rough, or porous areas• Use a tube float or other finishing device approved by the Engineer to provide a smooth surface• Do not add water to the surface to aid finishing

Construction Joints	<ul style="list-style-type: none"> Form when the mixture placement is interrupted for more than 1 hour
Curing	<ul style="list-style-type: none"> Apply compound for the impervious membrane method at a rate of 200 ft²/gal (5 m²/L) or less Apply a second application of curing compound just before placing the pavement to act as a bond breaker (at the rate of the first application)
Preserving the Subbase	<ul style="list-style-type: none"> Maintain the subbase until it is covered by the succeeding pavement course Place the pavement course on subbase only after the mixture has cured for 7 days Construct earth ramps and barricades to move traffic across the subbase
Weather Limitations	<ul style="list-style-type: none"> Do not place the subbase mixture when the air temperature (in the shade) is less than 40°F and falling Protect the subbase from rain until the surface has sufficiently hardened to prevent marring



Payment

Item	Payment Method
Portland Cement Concrete Subbase	Contract Unit Price per square yard (meter)



Related Specifications

Section	Title
109	Measurement and Payment
430	Portland Cement Concrete Pavement
500	Concrete Structures
800	Coarse Aggregate
801	Fine Aggregate
815	Graded Aggregate
830	Portland Cement
831	Admixtures
832	Curing Agents

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